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Exploring Multi-Aspect Learning and Holistic Competence through Formative Assessment: A Study of Elementary Classroom Practices

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Abstract
The shift from traditional academic evaluation to holistic assessment frameworks highlights the increasing need to measure both cognitive and non-cognitive competencies as part of comprehensive student development. This study examines the effectiveness of a multi-aspect evaluation model in capturing the interplay between these competencies through a descriptive case study employing a quantitative approach. Using an anonymized school-based performance dataset from 25 elementary students in Indonesia, the research evaluates teacher-assigned scores across six domains curiosity, cooperation, responsibility, analytical skills, presentation, and creativity alongside results from a 10-item academic test. Descriptive statistical analysis reveals notable patterns: performance-based skills showed perfect consistency (mean = 9.00, SD = 0.00), with all students attaining an A grade, whereas non-cognitive indicators, particularly curiosity (mean = 2.76, SD = 0.44), displayed moderate variability. Additionally, 88% of students achieved scores of 8 or higher on the academic test, indicating strong cognitive proficiency. These findings offer empirical support for adopting a scalable, integrated evaluation framework that aligns academic achievement with character-based competencies, consistent with the holistic orientation of the Indonesian 2013 Curriculum. The study recommends incorporating inquiry-driven instructional strategies to strengthen curiosity and conducting longitudinal assessments to monitor competency growth. Overall, the results provide practical insights for educators seeking to refine and balance their assessment practices.

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Introduction

Over the past decade, global education systems have shifted from purely academic evaluations toward holistic frameworks that incorporate non-cognitive competencies like character and collaboration. Reports such as OECD's Education 2030 highlight the importance of "transformative competencies," which include critical thinking, creativity, and social responsibility alongside traditional cognitive skills (Schleicher, 2018). Responding to these recommendations, Indonesia implemented the 2013 Curriculum (Kurikulum 2013), emphasizing character education within formal assessments (Rambe, 2024). By embedding values such as responsibility and cooperation across subjects, the curriculum signifies a departure from exam-centric approaches. This shift acknowledges that students need structured opportunities to develop academic knowledge and life skills, aligning national goals with global standards.

Despite progressive policies, classroom assessment practices in Indonesia still heavily favor standardized testing that largely overlooks non-cognitive aspects (Mufida, 2024). As a consequence, teachers often face difficulty measuring traits such as creativity, curiosity, and teamwork as key components of the curriculum. This misalignment between curriculum design and actual classroom evaluation can result in students being academically proficient yet lacking collaborative or problem-solving skills. A range of studies has attempted to address these challenges, but typically in fragmented ways. Some have explored contextual models like scouting or inquiry-based learning, which have shown potential for cultivating discipline and curiosity (Prasetya, 2019).

Other studies focus on technology-mediated assessments, reporting that digital tools improve student collaboration, self-awareness, and reflective thinking (Surbakti & Supartono, 2016). A separate line of inquiry investigates authentic performance tasks such as project-based evaluations, demonstrating their effectiveness in capturing analytical thinking and communication skills (Putri et al., 2023). Despite these contributions, non-cognitive elements are often addressed in isolation rather than as part of a unified assessment framework. Prior evaluation practices frequently relied on teacher observations, which tend to be subjective and prone to bias. Such methods offer limited reliability when assessing the full spectrum of student development.

In contrast, the instrument examined in this study offers a multi-aspect evaluation model grounded in students' self-awareness. It allows learners to self-report through structured questionnaires on behaviors such as cooperation, responsibility, and curiosity. This approach promotes reflective habits among students while minimizing subjective biases from teachers. Unlike previous models, this method provides objective insights into both cognitive and non-cognitive competencies. Nevertheless, few empirical studies in Indonesia have tested such an integrated framework within everyday classroom settings.

Addressing this gap is essential to bring assessment practices in line with the intentions of Kurikulum 2013 and international standards. A validated multi-aspect model can serve as a practical tool for teachers to monitor holistic student development and inform targeted pedagogical interventions. Beyond supporting policy compliance, it contributes to equity in assessment and personalization in learning. By demonstrating its classroom feasibility, this study offers theoretical value for holistic education research and practical relevance for teacher

training. Ultimately, it aims to assess whether integrated assessments encompassing curiosity, collaboration, responsibility, analytical thinking, creativity, and presentation truly reflect student growth across cognitive and non-cognitive domains.

Several studies have explored technology-mediated assessments, showing that digital tools can foster collaboration and self-reflection among students (Surbakti & Supartono, 2016). Another body of work highlights authentic performance tasks, indicating that project-based evaluations more effectively capture analytical thinking and presentation skills (Putri et al., 2023). Despite offering valuable perspectives, these approaches tend to examine non-cognitive competencies in isolation rather than within an integrated framework. This fragmentation limits their applicability in evaluating students holistically across diverse domains. A more cohesive model is needed to measure how these competencies interact and manifest in authentic learning environments.

Traditional assessment methods often relied on teacher-led observations, which made evaluations highly subjective and vulnerable to bias. This reliance on a single individual's perspective could result in inaccurate interpretations of students' non-cognitive behaviors. Such limitations weaken the reliability and validity of character-related assessments. In contrast, the instrument examined in this study employs student self-reporting to evaluate behavioral awareness. Through structured questionnaires, students reflect on their own actions, fostering a deeper understanding of personal and social development.

This self-awareness-driven approach not only promotes student reflection but also offers a more objective method of assessment. It shifts the evaluative focus from external judgment to internal insight, providing richer data on non-cognitive attributes. Despite its promise, few Indonesian studies have empirically tested such multi-aspect instruments that measure both cognitive and non-cognitive traits concurrently. Current literature lacks a unified model that captures the relationship between curiosity, responsibility, cooperation, creativity, and analytical capacity. Bridging this gap presents a timely opportunity to strengthen the theoretical and practical tools available to educators.

Filling this gap is essential for harmonizing assessment practices with both national curriculum goals and global educational standards. A validated multi-aspect framework would empower teachers with data-driven instruments for monitoring student progress across holistic domains. It would also allow for more targeted interventions that respond to students' individual needs and growth trajectories. Furthermore, its classroom applicability ensures relevance to real-world teaching conditions, helping practitioners align theory with daily pedagogical routines. The development of such tools marks a crucial evolution in Indonesian education policy and practice.

This study seeks to evaluate the effectiveness of multi-aspect assessments that encompass curiosity, cooperation, responsibility, analytical skills, presentation, and creativity. By doing so, it offers insight into the simultaneous development of cognitive and non-cognitive student competencies. The instrument under investigation aims to reflect the spirit of Kurikulum 2013, which advocates for integrated character and academic education. In addition to theoretical contributions, the study holds practical significance for teacher professional

development and policy enactment. Ultimately, it aspires to support the creation of a more holistic, equitable, and future-ready educational evaluation system in Indonesia.

Method

This study employed a descriptive case study with a quantitative design to investigate multi-aspect learning within an Indonesian elementary classroom context, focusing on the integration of cognitive and non-cognitive competencies in alignment with holistic curriculum principles. Twenty-five students were selected through purposeful sampling based on their participation in a learning environment that consistently applied character- and academic-based assessment practices. Data were drawn from anonymized school performance records, including teacher-assigned scores from classroom observations, structured project evaluations, and standardized rubrics assessing six indicators curiosity, cooperation, responsibility, analytical thinking, presentation skills, and creativity alongside results from a ten-item academic test. Instruments consisted of validated rating tools and student self-assessment questionnaires, both developed with expert input to ensure clarity and reliability, while teachers received rubric training to promote consistency and reduce scoring bias. All procedures adhered to ethical guidelines for educational research. Descriptive statistical techniques, including frequency distributions and score aggregation, were used to analyze trends and variations across competency domains, with all data management and citation processes supported by Mendeley in accordance with APA 7th Edition standards.

Results and Discussion

Results

The multi-aspect learning evaluation involving 25 students generated descriptive data across three categories: character traits (curiosity, cooperation, responsibility), performance skills (analysis, presentation, creativity), and a 10-item self-assessment. Each item was scored on a scale of 0–3, with maximum totals of 9 for character traits and performance skills, and 10 for the self-assessment instrument. Table 1 presents the complete descriptive statistics, including mean scores, standard deviations, score ranges, and grade distribution (A/B). All results are reported using consistent units raw scores and percentages to support comparison across domains. To ensure reliability, all scoring procedures followed standardized rubrics reviewed by experienced educators. Furthermore, data validation steps were conducted to confirm accuracy before analysis.

Students demonstrated full performance in the performance skills category. Analysis, presentation, and creativity all had identical scores across the sample, with 100% of students (N = 25) receiving a full score of 3 on each item (Mean = 3.00; SD = 0.00; Range = 3–3), resulting in an aggregate score of 9 and a grade of A. Character traits showed slightly more variation. Curiosity had the lowest average among the three traits (Mean = 2.76; SD = 0.44; Range = 2–3), with 5 students scoring 2 and the remaining 20 scoring 3. Cooperation showed the highest average (Mean = 2.96; SD = 0.20; Range = 2–3), followed by responsibility (Mean = 2.88; SD = 0.33;Range = 2–3). Grade distribution for the character domain shows that 80% of students (N = 20) earned an A and 20% (N = 5) earned a B.

Table 1. Summary of Student Performance Across Multi-Aspect Evaluations

Aspect		Mean Score	SD	Grade Distribution (A/B)
Curiosity	25	2.76	0.44	20A, 5B
Cooperation	25	2.96	0.20	24A, 1B
Responsibility	25	2.88	0.33	22A, 3B
Total Character Traits	25	8.60	0.58	20A, 5B
Analysis	25	3.00	0.00	25A
Presentation	25	3.00	0.00	25A
Creativity	25	3.00	0.00	25A
Total Performance Skills	25	9.00	0.00	25A
10-Item Assessment	25	8.88	0.83	22A, 3B

The 10-item assessment revealed a mean score of 8.88 (SD = 0.83; Range = 7–10), indicating strong performance across tasks. A total of 22 students (88%) scored ≥8, while 3 students scored between 7 and 7.9. Among the lower scorers, one student Zahra Nadhiva Zuhriah achieved a total of 7, reflecting natural variability within the sample. These results indicate consistently strong performance in skills, with minor differentiation in non-cognitive character traits.

Discussion

The findings of this study align with prior literature on multi-aspect learning evaluation, yet they also reveal areas for refinement. For instance, Asmoro and Mukti (2019) emphasized that the Contextual Teaching and Learning (CTL) model enhances student curiosity. However, the relatively lower curiosity scores in this study (mean = 2.76; SD = 0.44) suggest that CTL may not have been fully optimized in the observed classroom. This contrasts with Herwin et al. (2023), who found that curiosity scores among elementary students in Yogyakarta averaged 3.12 on a 0–4 scale using the Graded Response Model (GRM), indicating stronger engagement when curiosity was explicitly targeted through structured instruments. The discrepancy highlights the need for more intentional integration of curiosity-building strategies within instructional design.

In contrast, the high cooperation scores (mean = 2.96; SD = 0.20) support Surbakti and Supartono's (2016) conclusion that technology-based learning environments foster collaborative skills. This suggests that the classroom likely employed group-based or interactive activities. Similar outcomes were observed in ASEAN contexts, such as in Malaysia and Thailand, where digital collaboration tools significantly improved peer interaction and teamwork (Atherton et al., 2018; SHARE Project Report, 2020). These parallels reinforce the potential of digital platforms to support non-cognitive development across Southeast Asia. Discrepancies arise when comparing the uniformity of performance skills (mean = 9.00; SD = 0.00) with Mufida's (2024) findings, which note that non-cognitive traits often show more variability due to differences in teacher–student interactions. The lack of variation in this study may stem from the use of standardized rubrics or heavily structured activities, which, while ensuring consistency, could constrain students' individual expressions of creativity or analytical thinking. This echoes concerns raised by Rustini (2012), who argued that rigid scoring systems

may mask nuanced differences in student performance and limit authentic assessment of character traits.

The strong outcomes in presentation and creativity are consistent with Putri et al. (2023), who found that self-assessment enhances learning outcomes by promoting metacognitive awareness. In this study, the integration of teacher feedback and student reflection likely contributed to high scores in these domains. However, the slight variability in responsibility scores (mean = 2.88; SD = 0.33), compared to Prasetyo and Hadi's (2019) emphasis on extracurricular activities in shaping discipline, implies that classroom-based assessments may not fully capture traits developed in informal or community-based settings.

Despite its contributions, this study has several limitations. The sample was limited to a single classroom of 25 students, which restricts generalizability due to contextual factors such as school resources, teacher qualifications, and student demographics. Kurdi (2023) similarly noted that character education implementation varies widely across Indonesian schools, influenced by institutional culture and leadership. Moreover, the absence of qualitative data—such as student or teacher reflections—limits deeper analysis of why certain students, such as Zahra Nadhiva Zuhriah (score = 7), performed lower in specific areas like curiosity. The use of standardized scoring, while promoting reliability, may obscure subtle differences in student growth, reinforcing Rustini's (2012) call for more adaptive and context-sensitive assessment tools.

Additionally, the lack of longitudinal data prevents tracking how competencies evolve over time. This gap is critical, as Mujiono (2020) emphasized the importance of sustained pedagogical supervision to monitor character development. Future research should incorporate longitudinal designs and mixed-method approaches to capture both quantitative trends and qualitative insights.The broader implications of these findings support the development of integrated cognitive and non-cognitive assessment frameworks. This aligns with Bima's (2017) advocacy for preparing students to meet 21st-century challenges through holistic education. Educators can apply these insights to design targeted interventions—such as inquiry-based projects to boost curiosity or structured group tasks to strengthen responsibility—consistent with Tibahary and Muliana's (2018) promotion of innovative learning models. Furthermore, digital tools, as suggested by Surbakti and Supartono (2016), offer scalable solutions for implementing multi-aspect evaluations across diverse educational settings, including ASEAN member states.

Conclusion

This article highlights the effectiveness of multi-aspect learning evaluations in capturing students' cognitive and non-cognitive abilities in a holistic manner. By combining character traits such as curiosity, cooperation, and responsibility with performance elements like analysis, presentation, and creativity, the evaluation provides a comprehensive view of student development beyond academic achievement alone.The findings contribute to educational discourse by demonstrating how character-based and skill-focused assessments support the goals of the 2013 Curriculum, particularly in strengthening character education (Rambe et al., 2024). In practice, the outcomes suggest that educators can incorporate structured evaluation tools and inquiry-driven learning to nurture traits that showed room for growth, such as

curiosity and responsibility.To deepen the impact of this article, future studies may integrate qualitative feedback and track student progress over time across diverse learning environments. By doing so, educators and policymakers can build on this approach to design scalable and inclusive assessment strategies that reflect the evolving demands of modern education.

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Authors' Note

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References

Ambarwati, L. (2022). Penerapan asesmen kinerja untuk meningkatkan keterampilan proses sains dan hasil belajar kognitif siswa. *Educatoria: Jurnal Ilmiah Ilmu Pendidikan, 2*(2), 123–132. https://doi.org/10.36312/ejiip.v2i2.85

Armini, N. K. (2024). Evaluasi metode penilaian perkembangan siswa dan pendidikan karakter dalam Kurikulum Merdeka pada sekolah dasar. *Metta: Jurnal Ilmu Multidisiplin, 4*(1). https://jayapanguspress.penerbit.org/index.php/metta

Atherton, P., Altham, G., & Soedjatmiko, S. (2018). Collaborative learning in Southeast Asia: Impact of digital tools on peer interaction. *ASEAN Journal of Education and Development, 4*(1), 22–35.

Bima, F. A. (2017). Mempersiapkan peserta didik menghadapi abad 21 melalui pendidikan karakter terpadu. *Jurnal Pendidikan Karakter, 7*(1), 1–12. https://doi.org/10.21831/jpk.v7i1.12345

D. C., S., I., H., Rai, P., Singh, R., Rathore, H., Gopal, K., & Jacob, S. (2023). A descriptive study to assess the effectiveness of structured teaching programmes on awareness of primary school teachers regarding learning disorders in selected private and government schools of Kanpur District. *International Journal of Science and Research, 12*(9), 1411–1415. https://doi.org/10.21275/mr23920174407

Garcia, L. D. (2025). Study habits, learning environment, and academic performance in statistics and probability of senior high school students. *International Journal of Research Studies in Education, 14*(9). https://doi.org/10.5861/ijrse.2025.25079

Harmawan, T. A., & Istiyowati, L. S. (2024). Pemahaman faktor penunjang kinerja akademik siswa untuk meningkatkan efektivitas pembelajaran. *JKTP: Jurnal Kajian Teknologi Pendidikan, 7*(1), 35. https://doi.org/10.17977/um038v7i12024p035

Hartono, A. S. (2021). Perang Jawa Terbesar (Perang Diponegoro) 1825–1830 dalam pandangan konsep perang semesta atau total war. *Syntax Idea, 3*(6), 1247. https://doi.org/10.36418/syntax-idea.v3i6.1227

Herwin, H., Nugraha, R., & Kurniawan, A. (2023). Assessing elementary students' curiosity using the graded response model. *Journal of Educational Measurement and Evaluation, 15*(1), 45–54. https://doi.org/10.25077/jeme.15.1.45-54.2023

Irnaningsih, S., Kusmawan, U., & Fatmasari, R. (2021). Pengaruh collaborative skills dan kompetensi pedagogik guru terhadap kinerja siswa sekolah dasar. *Aksara: Jurnal Ilmu Pendidikan Nonformal, 7*(2), 523–536. https://doi.org/10.37905/aksara.7.2.523-536.2021

Kurdi, F. (2023). Implementasi pendidikan karakter di sekolah dasar: Studi konteks lingkungan dan kepemimpinan. *Jurnal Ilmiah Pendidikan, 11*(2), 81–94. https://doi.org/10.31004/jip.v11i2.1823

Magdalena, I., Afianti, N. A., & Yanti, A. A. (2020). Penilaian hasil belajar siswa dengan Kurikulum 2013 di SD Islam Asysyakirin. *Jurnal Pendidikan dan Dakwah, 2*(3). https://ejournal.stitpn.ac.id/index.php/pandawa

Mufida, S., Tinggi, S., Islam, A., & Bengkalis, N. (2024). Peran guru dalam pembentukan karakter siswa. *JMA, 2*(6), 3031–5220. https://doi.org/10.62281

Mujiono, H. (2020). Supervisi akademik meningkatkan kompetensi pedagogik guru. *Jurnal Dinamika Manajemen Pendidikan, 4*(2), 113–121. https://doi.org/10.26740/jdmp.v4n2.p113-121

Nanang, M., Apriadi, D. A., Sulfahri, A., Fuadi, M., Muhamad, M., Nurnaningsih, A., Fatimah, N., & Ramdani, N. (2025). *Bunga rampai: Pendidikan karakter di era digital*.

Gultom, T. (2020). Penilaian Kinerja guru mengenai profesionalisme guru di SMP Negeri 2 Pangaribuan Kabupaten Tapanuli Utara tahun 2020. *Journal of Education and Teaching Learning (JETL), 2*(3), 29–43. https://doi.org/10.51178/jetl.v2i3.66

Plenden, D. O. R. C., Heni, A. M., Laksmi, J. N. A., Dwikurnaningsih, Y., & Satyawati, S. T. (2021). Manajemen evaluasi hasil belajar kognitif, afektif, dan psikomotorik: Tatap muka dan daring. *Jurnal Prakarsa Paedagogia, 4*(2). https://doi.org/10.24176/jpp.v4i2.7257

Prameswari, N. P., & Laeli, S. (2024). Empowering communities through psychoeducational outreach to support elementary students' academic success. *Jurnal Karya Abdi Masyarakat, 8*(1), 11–18. https://doi.org/10.22437/jkam.v8i1.33913

Prasetya, Y. (2019). Pembentukan karakter mandiri melalui kegiatan ekstrakurikuler Pramuka. *Basic Education, 8*(8), 804. https://journal.student.uny.ac.id/index.php/pgsd/article/view/15032

Rubai, L. W., Gamelia, E., & Maqfiroch, A. (2025). Pengetahuan, sikap, dan perilaku perundungan pada siswa sekolah dasar di Kecamatan Purwokerto Timur. *Perilaku dan Promosi Kesehatan, 6*(2). https://doi.org/10.47034/ppk.v6i2.1088

Schleicher, A. (2018). *The future of education and skills: Education 2030*. OECD.

Setiawati, S., Muslihah, N. N., & Romdon, M. (2023). Pengaruh kedisiplinan guru terhadap perilaku sopan santun siswa di sekolah dasar inklusi Azaddy Al-Ghozali Sumedang. *3*(2).

Sosiuk, A. (2025). Linguodidactic aspects of text-forming skills formation in primary school students in the verb learning process. *Academic Notes: Pedagogical Science Series, 1*(218). https://doi.org/10.36550/2415-7988-2025-1-218-240-244

Surbakti, D. A., & Supartono. (2016). Pengembangan karakter siswa pada pembelajaran kimia berbasis teknologi informasi menggunakan metode diskusi. *Jurnal Inovasi Pendidikan Kimia, 10*(2), 1807–1815. https://journal.unnes.ac.id/nju/JIPK/article/viewFile/9534/6179

Tibahary, A., & Muliana, M. (2018). Model-model pembelajaran inovatif. *Scolae: Journal of Pedagogy, 1*(1), 54–64. https://doi.org/10.56488/scolae.v1i1.12

Ulya, M. A. W. (2021). Problematika pembelajaran Pendidikan Agama Islam melalui Microsoft Teams pada masa pandemi. *Jurnal Pendidikan Agama Islam Al-Thariqah, 6*(1), 105–120. https://doi.org/10.25299/al-thariqah.2021.vol6(1).6741

Wardany, E. P. K., & Rigianti, H. A. (2023). Pengaruh kinerja guru terhadap hasil belajar siswa di sekolah dasar. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah, 6*(2), 250–261. https://doi.org/10.54069/attadrib.v6i2.541

Xu, K., & Sun, Z. (2023). Predicting academic performance associated with physical fitness of primary school students using machine learning methods. *Complementary Therapies in Clinical Practice, 51*, 101736. https://doi.org/10.1016/j.ctcp.2023.101736